

REMARKS

The Examiner is thanked for the thorough review and consideration of the present application. The non-final Office Action dated May 4, 2004 has been received and its contents carefully reviewed.

By this Response, Applicants have amended the specification and claims 1, 3, 6 and 15. No new matter has been added. Claims 1-22 are pending in the application with claims 10-14 being withdrawn from consideration. Reconsideration and withdrawal of the objection and rejections in view of the above amendments and the following remarks are requested.

In the Office Action, the drawings are objected to under 37 CFR 1.83(a) ("the drawings must show every feature of the invention specified in the claims."). Applicants have amended claims 1, 3, 6 and 15. Thus, Applicants submit the objections are overcome. With reference to the embodiment depicted in FIGs. 11 and 12, the Office Action correctly states FIGs. 11 and 12 do not show the first protective layer. Applicants submit FIGs 11 and 12 illustrate an embodiment of the present invention in which the liquid crystal display is manufactured without a protective layer. For example, in independent claim 6, a protective layer is not claimed. Figures 11 and 12 are further objected to because the Office Action alleges the figures do not show "connection between the storage electrode and the pixel electrode." Applicants respectfully note FIG. 12 is a cross-sectional view of FIG. 11 taken along line IV-IV'. The sectional view IV-IV of FIG. 11 does not pass through the overlapping portion of the pixel electrode 52 and storage electrode 60. Thus, the relationship between the pixel electrode 52 and storage electrode 60 is not depicted in the sectional view of FIG. 12. However, as provided on page 15, lines 27-30, "referring to 11 and Fig. 12, a lower substrate of a liquid crystal display device according to a second embodiment of the present invention has the same elements as the liquid crystal device shown in Fig. 8, except that a pixel electrode 52 takes a substantially rounded shape of surrounding a storage electrode 60." On page 15, lines 33-35 of the Specification, "the pixel electrode 52 is formed in the pixel area and extends into each edge of all sides of the storage electrode 60 in addition to the area of the storage electrode, as shown in Fig. 11. Further, as stated on page 16, lines 25-27 of the Specification, "the pixel electrode is formed to cover entirely the surface and all side edges of the storage electrode." Accordingly,

Applicants submit it is possible to determine the relationship between the pixel electrode and the storage electrode from the description of the embodiment in the Specification and Fig. 11.

Based upon the amendments to claims 1, 3, 6 and 15 and the above remarks, Applicants believe no drawing corrections are necessary and respectfully request that the drawing objections be withdrawn.

In the Office Action, claims 1-9 and 15-22 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants have amended claims 1, 3, 6 and 15. With regard to the rejection, as applied to FIGs. 11 and 12, Applicants kindly direct the Examiner to the above remarks regarding the lack of a first protective layer and the connection between the storage electrode and the pixel electrode in FIGs. 11 and 12. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action, claims 1-5, 20 and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,926,235, issued to Han et al (hereafter "Han"). Applicants traverse the rejection because Han fails to teach or suggest each of the features recited in the claims of the present application. In particular, Han fails to teach or suggest a liquid crystal display device that includes, among other features, "a first protective layer formed between the storage electrode and the pixel electrode at a portion of an overlapping area between the storage electrode and the pixel electrode, wherein the storage electrode is directly connected to the pixel electrode at an end of the overlapping area between the storage electrode and the pixel electrode" as recited in claim 1 of the present application. Because Han fails to teach or suggest these features of claim 1, claim 1 and its dependent claims 2-5 and 20-21 are allowable over Han. Reconsideration and withdrawal of the rejection are requested.

In the Office Action, claims 15-18 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Han in view of U.S. Patent No. 6,262,784, issued to Kim. Applicants traverse the rejection because neither Han nor Kim, analyzed alone or in any combination, teaches or suggests a liquid crystal display device that includes, among other features, "a first protective layer patterned on a portion of an overlapping area of the storage electrode between the storage electrode and the pixel electrode, wherein the pixel electrode directly connects to the

storage electrode at an end of the overlapping area between the storage electrode and the pixel electrode” as recited in independent claim 15.

Kim discloses “liquid crystal display devices having light blocking lines which do not contribute to parasitic capacitive coupling between data lines and pixel electrodes, and methods of forming the same” (col. 3, lines 53-57). However, Applicants respectfully submit Kim fails to remedy the deficient teachings of Han such that one of ordinary skill in the art would be motivated, by the teachings of Kim, to modify the device in Han to obtain a liquid crystal display device having the combined features recited in independent claim 15. Because Han and Kim fail to teach or suggest the combined features recited in independent claim 15, claim 15 and its dependent claims 16-18 and 22 are allowable over Han and Kim. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action, claims 6-9 and 19 would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph and to include all of the limitations of the base claims and any intervening claims. Applicants have amended claims 1, 3, 6 and 15. Applicants elect not to rewrite claims 6-9 and 19 to independent form at this time to allow the Examiner an opportunity to reconsider the rejections in view of the amendments and remarks presented in this response.

In view of the above, each of the presently pending claims in this application is in condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If the Examiner deems that a telephone conversation would further the prosecution of this application, the Examiner is invited to call the undersigned (202) 496-7500.

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Amendment dated August 3, 2004
Reply to Office Action dated May 4, 2004

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If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to Deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

Dated: August 3, 2004

Respectfully submitted,

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